Declassified in Part - Sanitized Copy Approved for Release @ 50-Yr 2013/05/30 : CIA-RDP82-00046R000500090007-0

F-4
45

INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

This material contains information affecting the National Defense of the United States within the meaning of the Espionage Laws, Title 18, U.S.C. Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

C-O-N-F-I-D-E-N-T-I-A-L

COUNTRY	Rumania/USSR	REPORT NO.	50X1
SUBJECT	Soviet and Satellite-Manufactured Radio Equipment	DATE DISTR.	13 June 1955
		NO. OF PAGES	7
DATE OF INFO.		REQUIREMENT NO.	RD
PLACE ACQUIRED		REFERENCES	50X1
DATE ACQUIRED			

SOURCE: 50X1

50X1

50X1

C-O-N-F-I-D-E-N-T-I-A-L

50X1

STATE #	x	ARMY #	x	NAVY #	x	AIR #	x	FBI		AEC					

(Note: Washington distribution ind ribution by "#".)

INFORMATION REPORT INFORMATION REPORT

Declassified in Part - Sanitized Copy Approved for Release @ 50-Yr 2013/05/30 : CIA-RDP82-00046R000500090007-0

Declassified in Part - Sanitized Copy Approved for Release @ 50-Yr 2013/05/30 : CIA-RDP82-00046R000500090007-0

50X1

CONFIDENTIAL

REPORT NO. [redacted]

50X1

COUNTRY Rumania

DATE DISTR. 24 May 1955

SUBJECT Soviet and Satellite-Manufactured Radio Equipment

NO. OF PAGES 6

DATE OF INFORMATION [redacted]

REFERENCES: [redacted]

50X1

PLACE ACQUIRED [redacted]

50X1

THIS IS UNEVALUATED INFORMATION

50X1

SOURCE [redacted]

NOTE: All receivers [redacted] had 10 to 15 meter-long antennas which were ground-connected and used a single wire. No provisions were made for the use of coaxial or doublet antennas. 50X1

1. [redacted] the following Soviet and Satellite-manufactured radio equipment: 50X1

a. Soviet-manufactured RSB transmitter and receiver

b. Soviet-manufactured SRKS transmitter

c. Soviet-manufactured US receiver

d. A seven or eight-tube battery-powered receiver which source believes was manufactured by the Soviets although its name and identification number had been removed from its panel.

e. Hungarian-manufactured Philips transmitter and receiver which was possibly one of the first sets made by Hungary under reparations to the Soviets.

f. Old German-manufactured FUG-10 transmitter and receiver equipped with a new antenna-tuner, power supply, and control box.

g. A Czech-manufactured receiver possibly made by Tesla.

h. Rumanian 75-watt short-wave transmitter manufactured by the former Standard Radio and Telephone Factory in Bucharest.

i. Direction finder battery-powered short-wave receiver also manufactured by Standard in Bucharest. Source believes that the Standard sets were designed for the use of the security services.

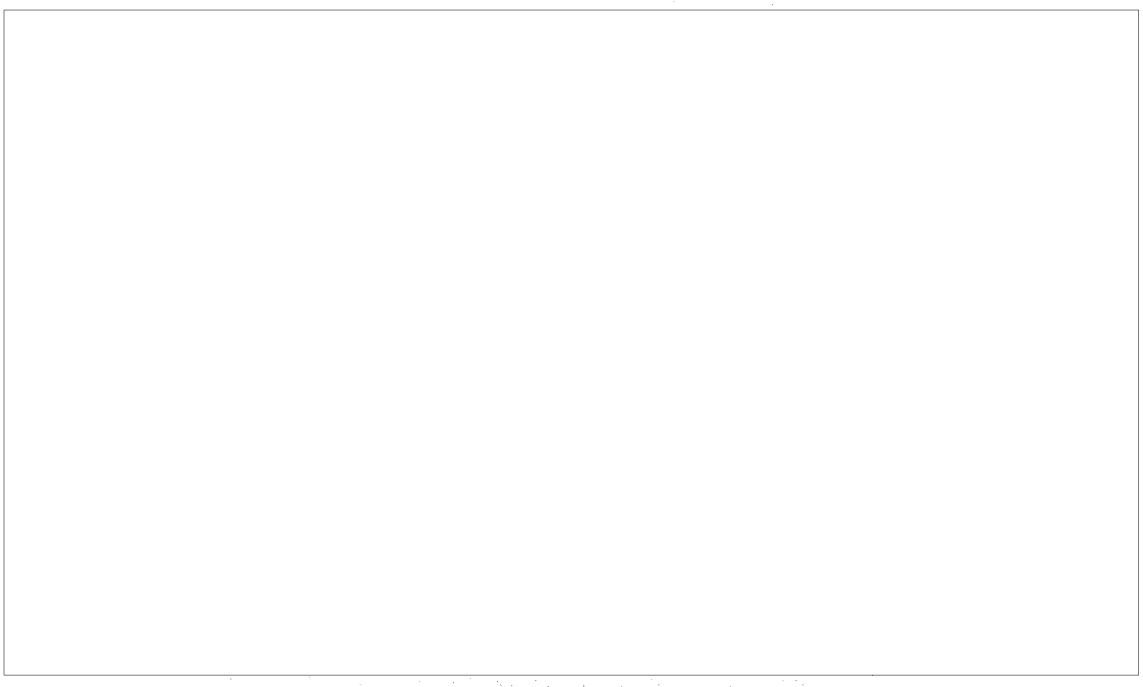
CONFIDENTIAL

Declassified in Part - Sanitized Copy Approved for Release @ 50-Yr 2013/05/30 : CIA-RDP82-00046R000500090007-0

Declassified in Part - Sanitized Copy Approved for Release @ 50-Yr 2013/05/30 : CIA-RDP82-00046R000500090007-0

50X1 50X1

2



RSB Transmitter and Receiver

3. The aerial system consisted of a single-wire Marconi antenna with counterpoise. This antenna, about 12 m. in length, worked efficiently and was tuned by a variometer included in the transmitter. Tuning was checked by a thermic amperemeter (ammeter). Because the thermo-couplings of the ammeters were of such poor quality, they broke down after a few tunings; therefore, operators preferred to use neon tubes. Source considers that the RSB offered amazing performance. A friend told him in 1947 that he had been able to maintain short-wave contact with Bucharest almost daily with this transmitter while on a voyage to New York. However, the operators complained because this battery-powered transmitter used directly-heated cathode tubes; these tubes became overheated frequently and led to premature breakage of the oscillator tubes. Also, a shift of frequency always occurred when the key was depressed.

4. Tuning to a frequency was very difficult because the RSB receiver was not new and because it had a very small dial scale. It had no crystal filters or variable tuning controls. Reception sensitivity on short wave was poor but that for medium and long wave was adequate. Although there was a possibility of using the transmitting aerial for receiving by building a special antenna relay into the transmitter's case, SOVROMTRANSPORT operators never used it because it interfered with the break-in system.

5. In general, [redacted] the RSB radio set was completely reliable but claims that to operate it efficiently, a skilled operator with iron nerves was needed. Maintenance was easy but slight difficulties occurred when the oscillator tube broke down and had to be exchanged. 50X1

6. In Rumania, nearly all tugboats were equipped with RSB sets. [redacted] learned from the Soviet director of SOVROMTRANSPORT's Radio Section and saw in the booklet, Direction for Use, that the Soviets used these sets in their aeroplanes, tanks, and army trucks. When they were used in trucks, gasoline generators were used to charge the batteries. Until 1949, SOVROMTRANSPORT used these gasoline generators on their tugboats but discontinued that practice later because the generators were defective. 50X1

Declassified in Part - Sanitized Copy Approved for Release @ 50-Yr 2013/05/30 : CIA-RDP82-00046R000500090007-0

Declassified in Part - Sanitized Copy Approved for Release @ 50-Yr 2013/05/30 : CIA-RDP82-00046R000500090007-0

50X1

SRKS Transmitter and US Receiver

7. The aerial system for short wave consisted of a single wire Marconi-type antenna. For medium wave, a 10 to 15-meter-long antenna was used. This latter antenna consisted of two single wires connected in parallel. The original aerial used for the SRKS transmitter was designed for medium wave only and had the regular Marconi-type antenna; however, it was difficult to mount and dismount aboard a ship and was,therefore, discontinued. (See page 5 for a sketch of this aerial.)

8. The transmitter was constructed on the same pattern as that of the RSB but, in addition to short wave, it also worked on medium wave. The transmitter used indirectly-heated cathode tubes but, in spite of this, frequency shifts occurred during the keying period. 50X1 operated this set only on short wave and it seemed to him to be as efficient as the RSB model. He learned from radio operators that contact on medium wave was good up to 400 sea miles. The SRKS seemed to be more reliable than the RSB, especially on small sea-going ships. Maintenance of the SRKS transmitter and its US receiver was easier than that of the RSB because of the better quality of the SRKS.

Philips Transmitter and Receiver

9. 50X1 It used a 10 to 12-meter-long antenna for short wave and a 20 to 30-meter-long Marconi antenna for medium wave. Both of these antennas were tuned by variometers included in the transmitter. (See page 6 for a sketch of this aerial.) To obtain the proper antenna capacitance on short wave, various fixed capacitors were used with the aerial. For medium wave, various plots on a special coil gave the proper antenna inductance.

10. The Philips set was of very poor quality and was the result of bad workmanship, possibly due to the fact that it was built by the Hungarians as reparations to the Soviets. The receiver was improperly constructed and there was bad contact between the variable coils and the tuning contacts on the short-wave transmitter. This resulted in frequent intermittent transmission and even auto-oscillations. The medium-wave transmitter was very difficult to tune and it took a long time to change a frequency. Modulated continuous wave was defective and it 50X1 50X1 On medium wave, this set offered normal contact within 200 to 300 sea miles. Source is of the opinion that these Philips sets were unreliable and were very inferior to the SRKS. Maintenance and repair of the Philips set was difficult. The numbers of the tube sockets and those on other parts did not correspond to the blueprints because various parts with completely different numbers had been taken from old German sets. The wires connected to the generators and batteries were not marked and also made identification very difficult.

FUG-10 Transmitter and Receiver

11. The German FUG-10 was manufactured prior to or during World War II with the exception of the antenna-tuner, power supply, and control box all of which were manufactured in East Germany after the end of the war.

12. The transmitter and receiver had Marconi antennas which were about 12 m. in length. For antenna tuning on short-wave transmission (sender kurz), two variometers, one radio frequency amperemeter, and various fixed capacitors were used. The proper antenna capacitance was obtained by turning a switch.

Declassified in Part - Sanitized Copy Approved for Release @ 50-Yr 2013/05/30 : CIA-RDP82-00046R000500090007-0

Declassified in Part - Sanitized Copy Approved for Release @ 50-Yr 2013/05/30 : CIA-RDP82-00046R000500090007-0

50X1

50X1

50X1

50X1

50X1

50X1

50X1

50X1

50X1

50X1

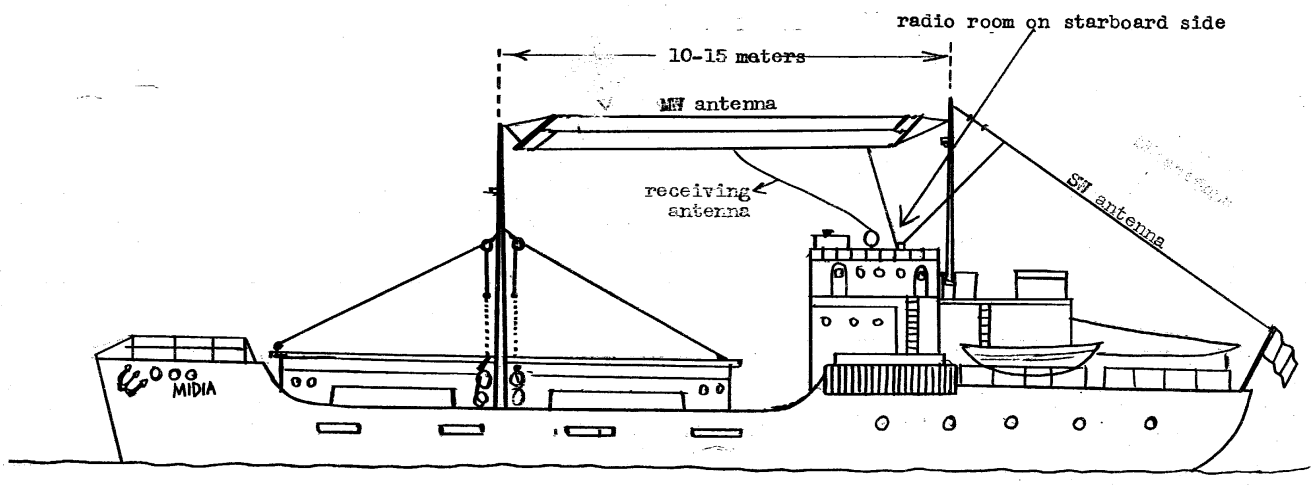
50X1

Page Denied

Declassified in Part - Sanitized Copy Approved for Release @ 50-Yr 2013/05/30 : CIA-RDP82-00046R000500090007-0

Declassified in Part - Sanitized Copy Approved for Release @ 50-Yr 2013/05/30 : CIA-RDP82-00046R000500090007-0

Antenna System on the MIDIA and SULINA

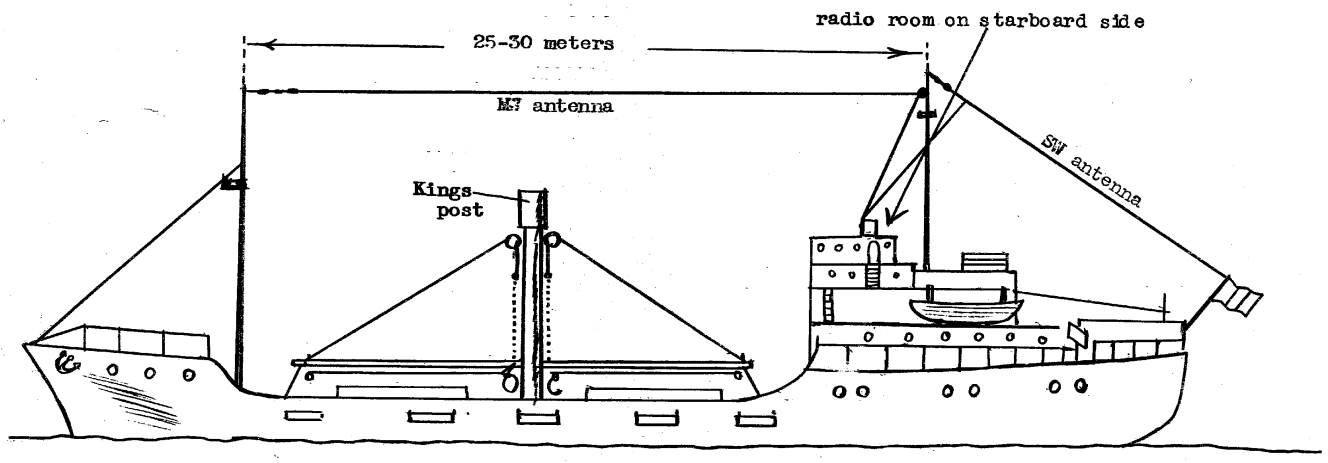


50X1

Declassified in Part - Sanitized Copy Approved for Release @ 50-Yr 2013/05/30 : CIA-RDP82-00046R000500090007-0

Declassified in Part - Sanitized Copy Approved for Release @ 50-Yr 2013/05/30 : CIA-RDP82-00046R000500090007-0

Antenna System on the CONSTANTA and MANGALIA



50X1

Declassified in Part - Sanitized Copy Approved for Release @ 50-Yr 2013/05/30 : CIA-RDP82-00046R000500090007-0